



## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004703

## Box No. 1 Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-61 \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-72 \_\_\_\_\_ received by this Authority on 24.02.2005 with the letter of 23.02.2005
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/5-5/5 \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement			
Novelty (N)	Claims	1-44, 47-72	YES
	Claims	45, 46	NO
Inventive step (IS)	Claims	1-22, 47-62	YES
	Claims	23-44, 63-72	NO
Industrial applicability (IA)	Claims	1-72	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

1. As conceded by the applicant himself in the introductory part of the description, lactobionic acid is a substance which has long been known. The same is true of maltobionic acid. Claims 45 and 46, which are directed to these substances, are therefore not novel.

2. The novelty of the subject matter of the remaining claims of the application is recognised.

3.1 Claims 1 and 47 are inventive in relation to D1 because the applicant could demonstrate that the catalyst claimed therein is more stable than the prior art catalyst, and because this discovery appears to be surprising.

3.2 The process as per claims 23 and 63 is not inventive for the following reasons:

The difference from the prior art document D1 consists only in a change of starting material. However, a person skilled in the art could have recognised at the filing date that the process described in D1 could be analogously applied to disaccharides and other oligosaccharides.

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**Box No. VIII** Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Claims 1 and 23 overlap and define in the overlapping range the claimed invention with different features. Thus, according to claim 1, the use of a metal oxide substrate for the catalyst is necessary to carry out the invention, while claim 23 also admits other substrate materials. The set of claims in its totality is therefore unclear.

2. The use claims 47 and 63 should be regarded as process claims and relate to the same subject matter as the actual process claims 1 and 23. However, they do not contain all their features. The set of claims in its totality is thus also unclear for this reason.